



Dr. C. SEKAR
Senior Professor and Head

Contact

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Academic Qualifications

Degree	Institution	Year	Branch	Class
Ph.D.	Crystal Growth Centre Anna University, Chennai.	1997	*Nanomaterials Science-Physics	Awarded
M.Sc.	Pachaiyappa's College University of Madras	1990	Physics	I Class
B.Sc.	Sacred Heart College University of Madras	1988	Physics	I Class

* Thesis title: Synthesis, Crystal growth and Characterization of Fullerenes and Some Studies on Carbon Nanotubes

Teaching Experience

Position	Institution	Duration
Senior Professor & Head	Dept. of Bioelectronics & Biosensors Alagappa University, Karaikudi.	11.03.2020 - till date
Professor & Head	Dept. of Bioelectronics & Biosensors Alagappa University, Karaikudi.	11.03.2010 - 10.03.2020
Lecturer/ Asst. Professor	Department of Physics Periyar University, Salem, India.	16.03.2005 -10.03.2010

PDF /Visiting Professor: Abroad

Position	Institution	Duration
Visiting Researcher	Department of Engineering University of Messina, Italy	18.05.2019-17.07.2019 (2 Months)
Visiting Professor	Research Institute of Electronics, Shizuoka University, Japan	01.09-2012-30.10.2012 (2 Months)
Scientist	Solid State Chem. Group IFW-Dresden, Germany	30.11.2000 - 15.03.2005 (4 Years 4 Months)
Post-Doctoral Fellow	Nippon Telegraph and Telephone (NTT) Corporation, Japan	20.10.1997- 19.10.2000 (3 Years)

Additional Responsibilities

No.	Position	University Bodies	Duration	
			From	To
1	Member- Senate	Alagappa University	11.03.2010	Till date
2	Member -Standing Committee	Alagappa University	11.03.2010	Till date
3	Dean-Industrial Consultancy	Alagappa University	26.03.2012	18.07.2015
4	Member-Quality Assurance Cell	Alagappa University	16.03.2010	Till date
5	Director, Centre for International Relations	Alagappa University	08.03.2016	Till date
6	Dean-Research	Alagappa University	04.10.2018	22.05.2020
7	Special Officer (Planning and Development)	Alagappa University	23.05.2020	29.05.2021
8	Registrar (FAC)	Alagappa University	30.05.2021	09.05.2022
9	Chairperson - School of Physical Sciences	Alagappa University	21.09.2021	Till date
10	Member Syndicate	Alagappa University	23.03.2023	Till date
11	Special Officer (EDM)	Alagappa University	28.02.2024	Till date
12	Coordinator-Centre for Nanotechnology	Periyar University, Salem.	22.05.2008	10.03.2010
13	Coordinator- Centre for Renewable Energy	Periyar University, Salem.	22.05.2008	10.03.2010

Areas of Research

- Materials Science: Metal oxide semiconductors, Carbon nanostructures, Biomaterials, Low dimensional cuprates, MOFs.
- Sensors: Chemical Sensors, Biosensors for Medical, Food, Agricultural and Environmental Applications

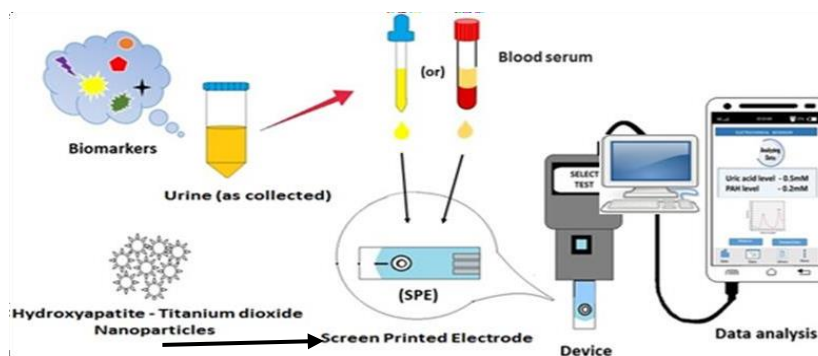
Patents Filed/Granted

1. ELECTROCHEMICAL DETECTION OF PARA-AMINOHIPPURIC ACID AND URICACID BIOMARKERS

Status: Granted (No. 453570 dated 21.09.2023)

Inventors: Dr C. Sekar, Ms. S. Anitta, Dr N. Lavanya

Field of Invention: The present disclosure broadly relates to the field of biomarker detection for clinical purpose and particularly refers to the electrochemical detection of Para-Aminohippuric acid (PAH) and Uric acid (UA) useful in the diagnosis of various hepatic and renal disorders.

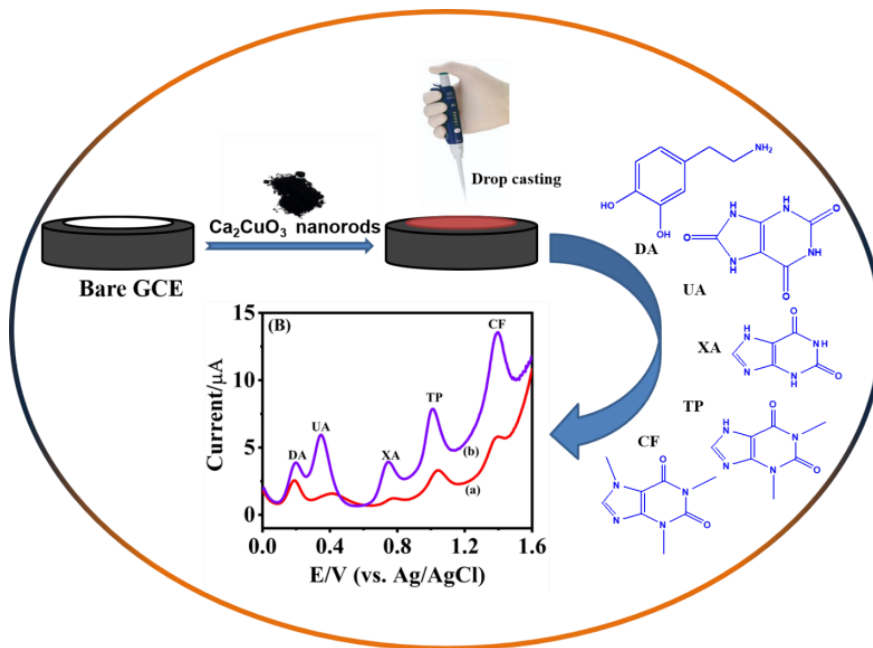


2. ELECTROCHEMICAL SENSOR FOR DETECTION OF BIOMOLECULES

Status: Granted (No. 456482 dated 04.10.2023)

Inventors: Dr C. Sekar, Mr. G. Veerapandi, Dr N. Lavanya

Field of Invention: The present disclosure broadly relates to the field of electrochemical sensors and particularly refers to biosensors for electrochemical sensing of biomolecules.

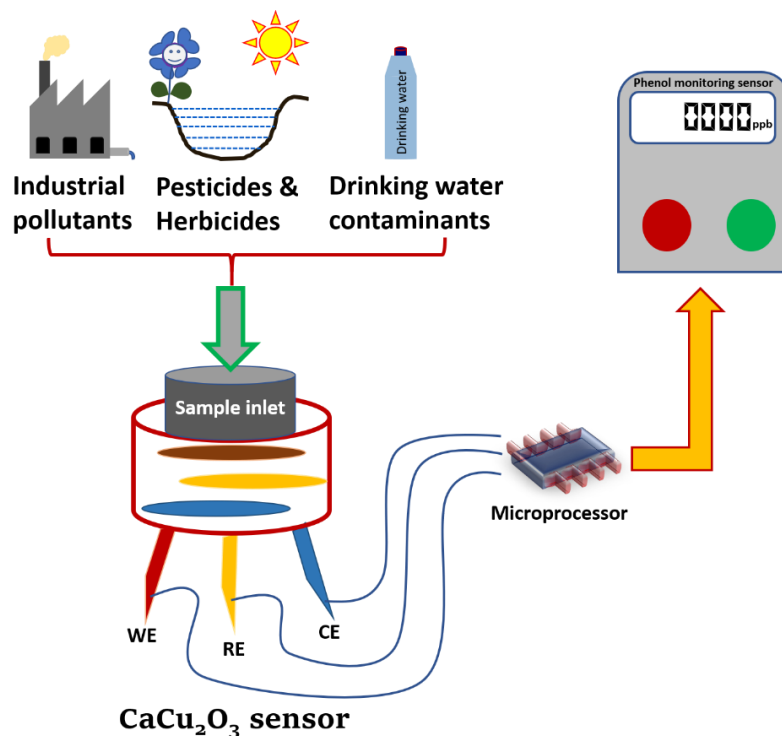


3. CaCu₂O₃ BASED ELECTRODE AND IMPLEMENTATIONS THEREOF

Status: Filed (Indian Patent Application No. 202141036180 dated 10.08.20201)

Inventors: Dr C. Sekar, Mr. G. Veerapandi

Field of Invention: The present disclosure broadly relates to the field of electrochemical sensors and particularly refers to sensor for electrochemical determination of phenolic compounds.



Research Supervision/Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	14	7
	M.Phil.	2	-
Project	PG	70	7
	UG / Others	2	-
PDF/RA	PDF/CSIR-RA	3	-

Research group

S. No.	Name & Designation
1.	Mr. Liu Zhaoqui
2.	Mr. C. Arul, Research scholar
3.	Mrs. Ammu Kripalal, Research scholar
4.	Mr. SB. Mayil Vealan, Research scholar
5.	Mrs. S. Meenakshi, Research scholar
6.	Mr. Ravi Maddula, Research scholar
7.	Ms. P. Archana, Research scholar

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters
120	33	1	191	03

Cumulative Impact Factor (as per JCR) : 555.273

h-index : 36 (Google Scholar)

i10 index : 81

Total Citations : 4093

<https://scholar.google.com/citations?user=qZET2msAAAAJ&hl=en>

Funded Research Projects

S. No	Funding Agency	Duration	Project Title	Budget (Rs. In lakhs)
1	RUSA 2.0 Entrepreneurship in Residence Scheme	2023-2024	An electrochemical sensor for early non-enzymatic diagnosis of hepatic disorders	20.00

2	RUSA 2.0 Entrepreneurship in Residence Scheme	2023-2024	Handy gadget to detect leaf nitrogen and rationalize fertilizer use (Agro-n-sense)	2.0
3	RUSA 2.0 Entrepreneurship in Residence Scheme	2023-2024	Construction of shock tube for improvement of materials properties	2.0
4	DST Indo-Sri Lanka joint Research scheme	2021-2024	Development of Cost-effective Portable Chemical Sensors for Seafood Quality Management	32.43
5	Inter University Accelerator Centre New Delhi	2021 - 2024	Microstructurally Engineered Nanocrystalline Calcium Phosphates for Biosensing Applications	5.29
6	Department of Science & Technology (DST/TDT/DDP)- Tech. Development Program	2019-2022	Development of “Foliar Diagnostic Kit for On-Site Detection of Nitrogen and Moisture Status in Crops”	10.65
7	RUSA 2.0 Theme based Research Project	2018-2024	Exploring Calcium Cuprate Nanomaterials for Sensing and Energy Applications	20.54
8	Council for Scientific and Industrial Research (CSIR)	2018-2021	Multiplexed Array of Electrodes for Electrochemical Determination of Cardiac Biomarkers	20.25
9	Alagappa University Research Fund (AURF)	2016-2018	Nanosensors for Medical Diagnostics	3.0
10	University Grants Commission	2016-2018	Design and Development of Chemo-resistive Gas sensors for Breath Analysis	30.0
11	Department of Science and Technology (DST- SERB)	2015-2018	Development of SnO ₂ - Graphene Composite based biosensors for neurotransmitter sensing	48.0
12	Council for Scientific and Industrial Research (CSIR)	2012-2015	Fabrication and characterization of HAP-CNT composites for biomedical applications	18.42
13	Inter-University Accelerator Centre (IUAC)- New Delhi	2011-2014	Effect of irradiation on the metal oxide semiconducting nanostructures for biosensor applications	5.4
14	University Grants Commission	2011-2014	Synthesis of WO ₃ and TiO ₂ nanomaterials and fabrication of gas sensors	10.3

15	Higher Education Department, Govt. of Tamilnadu	2009-2015	Establishment of Centre for Nanoscience & Technology at Periyar University, Salem.	100.0
16	University Grants Commission	2007-2010	Synthesis, Crystal Growth & Characterization of pure & doped Sodium Cobaltates Na_xCoO_2	10.75
17	UGC-DAE Collaborative Research	2006-2010	Materials Design, Crystal growth and Characterization of Spin ladders	4.5
			Total amount Rs. in Lakhs	343.53

Distinctive Achievements / Awards

- National Merit Loan Scholarship - Govt. of India (1983-1990)
- Junior Research Fellowship, DST-Govt. of India (Oct.'91-March'95)
- State Level Screening Test (SLET) in Physical Sciences (1990)
- Senior Research Fellowship (SRF), CSIR-Govt. of India (April'95-Oct.'97)
- TN State Council for Science and Technology (Travel grant - 1997)
- Council for Scientific and Industrial Research (Travel grant - 1997)
- Sir C.V. Raman Research Innovative Award-2009, Periyar University, Salem
- Visiting Professor, Shizuoka University, Hamamatsu, Japan. (Sept.-Oct. 2012)
- International Centre for Theoretical Physics (ICTP)-Italy (Travel grant- 2015)
- Alagappa Excellence Award for Research (2016-17)
- SERB-DST, Govt. of India (International Travel Support – May 2017)
- Best Poster Award – International Conference on Environmental Medicine, 10-11th December 2017, Kaohsiung Medical University, Taiwan.
- Visiting Researcher, University of Messina, Italy (May-July 2019)
- International Centre for Theoretical Physics (ICTP)-Italy (Special grant- 2019)
- ISPA Dr. S. Gunasekaran Award-2020, Indian Spectrophysics Association.
- ANVESHN-National Research Convention-Association of Indian Universities-2020, First Prize in Health Science and Applied Subjects, Pharmacy, & Nutrition.
- Outstanding Researcher award, Alagappa University, Karaikudi. (2022)

Events organized

Position	Programme	Duration	Institution
Convener	Regional Workshop on Nanomaterials Driven Advances in ChemoBioSensors – Nanose 2024	4 - 5 th April 2024	Alagappa University, Karaikudi.
Convener	International (Indo-Poland) Workshop on Functional Materials for Sensor and Energy Applications (FMSEA)	10 - 11 th November 2022	Alagappa University, Karaikudi.
Convener	International Conference Nanomaterials Driven Advances in Chemical and BioSensors	23 rd – 25 th March 2022	Alagappa University, Karaikudi.
Convener	National Workshop on Advanced Nanomaterials for Sustainable Energy and Sensors Applications	04 - 06 th March 2020	Alagappa University, Karaikudi.
Convener	International Conference Nanomaterials Driven Advances in Chemical and BioSensors	27 - 29 th November 2019	Alagappa University, Karaikudi
Convener	Workshop on Nano-Bio-Sensors: Present Status and Future Perspectives	08 - 09 th March 2018	Alagappa University, Karaikudi
Convener	Workshop on Biosensors in Agricultural, Environmental and Medical Sciences	13 th March 2017	Alagappa University, Karaikudi
Convener	Conference on Exploring Commercialization of Biosensors	14 th March 2017	Alagappa University, Karaikudi
Co-Convener	International Conference on Frontier Areas in Chemical Technologies (FACTs - 2016)	21 st - 23 rd March 2016	Alagappa University, Karaikudi
Convener	World Water Day	24 th March 2015	Alagappa University Karaikudi
Convener	Workshop on Electrochemical Instruments for Energy and Corrosion Applications	16 th February 2015	Alagappa University, Karaikudi
Convener	University-Industry Interface meet-II	28 th April 2014	Industry Consultancy Cell, Alagappa Univ.
Convener	University-Industry Interface Meet-I	24 th March 2014	Industry Consultancy Cell, Alagappa Univ.
Chairperson	National Conference on Recent Advances in Nanomaterials for Sensor Applications	06 - 07 th March 2014	Alagappa University, Karaikudi
Chairperson	National Conference on Recent Advances in Nanomaterials for Sensor Applications	08 - 09 th March 2012	Alagappa University, Karaikudi
Convener	National Conference on Recent Advances in in Biosensors	03 - 04 th March	Alagappa University, Karaikudi

		2011	
Convener	Commemoration of Intl. Year of Biodiversity (IYB-2010)	20 th December 2010.	Alagappa University, Karaikudi
Convener	Workshop on Recent Advances in Physical Sciences Research	18 - 19 th September 2005	Alagappa University, Karaikudi
Chairperson	Workshop on Financial Management	22 nd February 2012	Alagappa University SEBI, Govt. of India
Convener	Workshop on Photonic Materials Research	12 th March 2009	Periyar University Salem
Organizer	National Conference on Recent Advances in Vibrational Spectroscopy	29- 30 th January 2007	Periyar University Salem
Organizer	National Conference on Recent Advances in Materials Science	16-17 th February 2006	Periyar University Salem.

Overseas Visits

1. Japan-March 1997, Visit to NTT-BRL, NEC, Corporation, ISTECH-Tokyo, Toyashi University, Nagoya Institute of Technology
2. Singapore-March 1997
3. Canada- 191st Electrochemical Society (ECS) meeting-Montreal, 4-9 May 1997.
4. Japan- NTT R&D Labs, Post Doctoral Fellowship (Three years 1997 -2000)
5. USA-March 1999, APS meeting at Atlanta, Visit to MIT and ANL
6. France-May-June 2000, E-MRS meeting- Strasburg
7. Germany-June 2000, Invited talk at IFW- Dresden
8. Singapore-October 2000
9. Germany-Nov.2000 – March 2005, Job at IFW-Dresden
10. Italy-Spring School, Intl. Centre for Theoretical Physics,19-28th May2003 Trieste.
11. Switzerland-August 2004
12. France-14th Intl. Conference on Crystal Growth, 9-13th August 2004, Grenoble.
13. South Korea-November 2011, International Conference
14. Japan-September-October 2012, Visiting Professor, Shizuoka University
15. The Netherlands- November 2012, FEI Nanoport in Eindhoven
16. Italy – 2015, International Conference at ICTP-Trieste, & University of Messina
17. China - December 2016-Signing MOUs –International Collaboration
18. China-Visit to Tangshan Polytechnic College, Collaboration, December 2017
19. Singapore-International Conference, December 2017.
20. USA- 233rd Electrochemical Society (ECS) meeting, Seattle-WA, May, 2018
21. Malaysia – BU and OUM Institutional Collaboration – 28-29th January 2019
22. Singapore –LEAP - Nanyang Technological University, 17-24th February 2019

23. China-TPC and Tianjin University, Collaborative Research, April 2019
24. Singapore - Nanyang Technological Univ. & Alagappa Association, April 2019
25. Italy-University of Messina, Visiting Researcher, 18th May 2019-17th July 2019
26. Sri Lanka –Sri Lanka Technology Campus-Collaboration, 16-17th Oct. 2019

Membership

Professional Bodies

- Life Member-Materials Research Society of India (MRSI)
- Life Member-Crystal Growth Association of India
- Electrochemical Society-USA
- Member-Biosensor Society of India
- Member – Chennai Academy of Sciences

Academic Bodies (such as Board of Studies etc.,)

Year / Period	Name of the BoS / Administrative Committee/ Academic Committee	Role
Board of Studies		
2022	BOS-M.Phil. (Electronics & Communication) – Affiliated colleges of Alagappa University	Chairperson
2017-2020	Board of Studies - B.Sc. Electronics– Affiliated colleges of Alagappa University	Member
2017-2020	BOS-B.Sc. Electronics & Communication – Affiliated colleges of Alagappa University	Chairperson
2017-2020	Board of Studies -M.Sc. Electronics – Affiliated colleges of Alagappa University	Member
2017	BOS-M.Sc. Physics (Biosensors) – Alagappa University	Chairman
2016	BOS-M.Phil. (Electronics & Communication) - Affiliated colleges of Alagappa University	Chairman
2016	BOS-B.Sc. Electronics & Communication – Affiliated colleges of Alagappa University	Chairperson
Administrative and Academic Committees		
2022	Assessment committee – CSIR-CECRI	Member
2022	Research committee – Alagappa University	Member
2022	Standing committee – Alagappa University	Member
2022	Academic council – Alagappa University	Member
2022	Academic and Administrative review committee – Alagappa University	Expert
2022	Selection committee – Alagappa University	Subject expert
2022	Assessment Committee – CSIR CECRI	Member
2021	Assessment Committee – CSIR CECRI	Member
2021	Advisory committee – Alagappa University	Member
2021	Advisory committee – Alagappa University	Member
2021	Task Group – Alagappa University	Member
2021	Curriculum Advisory Committee – Alagappa University	Member

2020	Promoting And Incentivizing Quality Research and Publications (PIQRP) – Alagappa University	Member
2020	Research Centre – Review committee – Alagappa University	Member
2020	Oral Examination Board – Anna University	Member
2019	Doctoral Committee – VIT Vellore	Member
2018	Research Advisory Committee – Alagappa University	Convener
2018	Doctoral Committee – Bharathidasan University	Member
2018	Doctoral Committee – Bharathidasan University	Member
2017	Doctoral Committee – Anna University	Member
2016	Assessment Committee – CSIR CECRI	Member
2016	Research Advisory committee – Alagappa University	Member
2016	University News Letter (Azhagu) – Alagappa University	Co-Ordinator
2016	Doctoral Committee – SRM University	Member
2016	Doctoral Committee – Anna University	Member
2015	Research Advisory committee – Alagappa University	Member
2013	Patent Cell – Alagappa University	Member
2012	Solar Energy System – Committee – Alagappa University	Member
2010	Senate - Alagappa University	Member
2010	Centre for Nano Science and Technology - Periyar University	Convener

Ph.D. Thesis Guided

No.	Name of the Scholar	Title of the Thesis	Month & Year of Completion
1	Mr. G. Veerapandi	Nanostructured Ca_2CuO_3 and CaCu_2O_3 for Multiplexed Electrochemical Sensor and Supercapacitor Applications	April 2024
2	Dr. S. Anitta	Nanostructured hydroxyapatite based electrochemical sensors for biomedical and food applications	January 2024
3	Dr. S. Lokeswara Reddy	Transition Metal Ions Doped MgNi_2O_3 Nanoparticles for Chemo-Biosensor Applications	January 2023
4	Dr. AC. Anithaa	Engineered Tungsten oxide Nanostructures based Electrochemical Sensors for Neuropharmacological Applications	March 2019
5	Dr. N. Sudhan	Development of Calcium Phosphates based Biosensors for Medical and Environmental Applications	January 2019
6	Dr. N. Lavanya	Investigation of Nanostructured SnO_2 for Innovative Electrochemical and Gas Sensing Applications.	April 2017
7	Dr. A. Elakkina Kumaran	Effect of amino acid and metal ion impurities on the growth and properties of potassium hydrogen phthalate (KAP) Crystals	October 2013
8	Dr. M. Thenmozhi	Studies on the effect of trace elements on crystallization, structural and spectral properties of urinary stones: an experimental and theoretical approach	March 2013

9	Dr. K. Suguna	Investigation on the Effect of trace elements on Crystallisation and Properties of Brushite and Struvite Crystals	August 2013
10	Dr. M. Parthibavarman	Influence of dopants (Cu,Co,Cd) on structural, optical and gas sensing behavior of nano SnO ₂ by soft chemical route	February 2013
11	Dr. S. Paulraj	Studies on the synthesis crystal growth and physical properties of Na _x CoO ₂ and Fe-As based compounds	July 2012
12	Dr. P. Kanchana	Influence of additives on the Crystallization and Properties of Calcium Phosphate and Cholestrol	August 2011
13	Dr. V. Balasubramanian	Evolution of different types of low cost and low consumption device for solar thermal and photovoltaic applications	March 2011
14	Dr. R. Parimaladevi	Effect of additives on growth and properties of glycine family crystals	April 2010

List of Research Articles

S. No.	Authors/Title of the paper/Journal	Impact Factor
1.	SB. Mayil Vealan, and C. Sekar . Simultaneous determination of environmental endocrine disruptors bisphenol A and 4-nitrophenol bleached from food-contacting materials using the spin-ladder compound La ₂ Cu ₂ O ₅ modified glassy carbon electrode. <i>Chemosphere</i> (2024): 141559.	8.8
2.	G. Veerapandi, and C. Sekar . Investigation of glucose concentration in banana as a function of ripening time using Ni-Ca ₂ CuO ₃ based electrochemical sensor. <i>Journal of Food Composition and Analysis</i> 126 (2024): 105888.	4.3
3.	S. Lokeswara Reddy, N. Lavanya, and C. Sekar . Rapid and simultaneous detection of riboflavin, serotonin, and pyridoxine using Co-MgNi ₂ O ₃ nanoparticles modified glassy carbon electrode. <i>Ionics</i> 29, no. 11 (2023): 4851-4862.	2.8
4.	B. Thulasinathan, G. Veerapandi, P. Manickam, P. Kumar, M. Govarathanan, C. Sekar , A. Alagarsamy. Simultaneous electrochemical determination of persistent petrogenic organic pollutants based on AgNPs synthesized using carbon dots derived from mushroom. <i>Science of The Total Environment</i> (2023): 163729.	9.8
5.	S. Anitta and C. Sekar . Voltammetric determination of paracetamol and ciprofloxacin in the presence of vitamin C using cuttlefish bone-derived hydroxyapatite nanoparticles as electrode material. <i>Results in Chemistry</i> (2023): 100816.	2.3
6.	G. Veerapandi, S. Meenakshi, C. Sekar . Rapid detection of gingerol and thymol in medicinal foods based on Fe ₂ O ₃ nanoparticles modified glassy carbon electrode. <i>Journal of Food Measurement and Characterization</i> (2023): 1-13	3.4
7.	G. Veerapandi, N Lavanya, C. Sekar . Ca ₂ CuO ₃ perovskite nanomaterial for electrochemical sensing of four different analytes in the xanthine derivatives family. <i>Materials Chemistry and Physics</i> (2023): 295, 127076	4.6
8.	G. Veerapandi, R Govindan, C. Sekar . Quick and accurate determination of hazardous phenolic compounds using CaCu ₂ O ₃ nanorods based electrochemical sensor. <i>Chemosphere</i> (2023): 313, 137370	8.8

9.	N. Sudhan, S. Anitta, S. Meenakshi, C. Sekar . Brushite nanoparticles based electrochemical sensor for detection of uric acid, xanthine, hypoxanthine and caffeine. <i>Analytical Biochemistry</i> (2023): 659, 114947	2.9
10.	S. Anitta, C. Sekar . HAP-TiO ₂ nanocomposites based electrochemical sensor for selective and simultaneous detection of para aminohippuric acid and uric acid. <i>Microchemical Journal</i> (2022): 181, 107704	4.8
11.	DM Kandhasamy, J Kandasamy, C. Sekar , MH Abdellattif . Ultrafast dynamics of proflavine bound to poly (methacrylic acid) in aqueous solution. <i>Journal of Molecular Structure</i> (2022): 1258, 132676	3.8
12.	G. Veerapandi, S. Meenakshi, S. Anitta, C. Arul, P. Ashokkumar, C. Sekar . Precise and quick detection of ascorbic acid and eugenol in fruits, pharmaceuticals and medicinal herbs using hydroxyapatite-titanium dioxide nanocomposite-based electrode. <i>Food Chemistry</i> (2022): 382, 132251	8.8
13.	G. Veerapandi, S. Prabhu, R. Ramesh, R. Govindan, C. Sekar . Pseudo spin-ladder CaCu ₂ O ₃ nanostructures as potential electrode material for asymmetric supercapacitors. <i>Journal of Energy Storage</i> (2022): 48, 104051	9.4
14.	G. Vinodhkumar, Sujin P. Jose, S. Lokeswarareddy, C. Sekar , I. Vetha Potheher, and A. Cyrac Peter. Sensitivity enhancement in rGO/Mn ₃ O ₄ hybrid nanocomposites: A modified glassy carbon electrode for the simultaneous detection of dopamine and uric acid. <i>Synthetic Metals</i> 280 (2021): 116859.	4.4
15.	A.C. Anithaa, SB. Mayil Vealan, and C. Sekar . Enhancement of electrocatalytic activity in tungsten trioxide nanoparticles by UV-light irradiation: Application for simultaneous detection of tyrosine and tryptophan. <i>Sensors and Actuators A: Physical</i> 331 (2021): 113011.	4.6
16.	A.C. Anithaa, S. B. Mayil Vealan, G. Veerapandi, and C. Sekar . Highly efficient non-enzymatic electrochemical determination of histamine based on tungsten trioxide nanoparticles for evaluation of food quality. <i>Journal of Applied Electrochemistry</i> 51, no. 12 (2021): 1741-1753.	2.9
17.	S. Meenakshi, S. Anitta, A. Sivakumar, SA Martin Britto Dhas, and C. Sekar . Shock waves exposed α -Fe ₂ O ₃ nanoparticles for electrochemical sensing of riboflavin, uric acid and folic acid. <i>Microchemical Journal</i> 168 (2021): 106403.	4.8
18.	N. Sudhan, and C. Sekar . Nanostructured β -tricalcium Phosphate (Ca ₃ (PO ₄) ₂) Based Electrochemical Sensor for Detection of Methyl Parathion and Mercury (II) Ions. <i>Frontiers in Nanotechnology</i> 3 (2021): 16.	1.1
19.	Chelly, Meryam, Sabrine Chelly, Rayhane Zribi, Hanen Bouaziz-Ketata, Radhouane Gdoura, Nehru Lavanya, Ganesan Veerapandi, Chinnathambi Sekar , and Giovanni Neri. Synthesis of Silver and Gold Nanoparticles from Rumex roseus Plant Extract and Their Application in Electrochemical Sensors. <i>Nanomaterials</i> 11, no. 3 (2021): 739.	5.3
20.	Fazio, Enza, Salvatore Spadaro, Carmelo Corsaro, Giulia Neri, Salvatore Gianluca Leonardi, Fortunato Neri, Nehru Lavanya, Chinnathambi Sekar , Nicola Donato, and Giovanni Neri. Metal-Oxide Based Nanomaterials: Synthesis, Characterization and Their Applications in Electrical and Electrochemical Sensors. <i>Sensors</i> 21, no. 7 (2021): 2494.	3.9
21.	C. Arul, K .Moulaee, N. Donato, D. Iannazzo, N. Lavanya , G. Neri, C. Sekar. Temperature modulated Cu-MOF based gas sensor with dual selectivity to acetone and NO ₂ at low operating temperatures <i>Sensors and Actuators B: Chemical</i> (2020)	8.4

22.	Reddy, S. Lokeswara, C. Arul, Liu Zhaoqi, N. Lavanya, and C. Sekar . A novel electrochemical sensor based on Fe-doped MgNi ₂ O ₃ nanoparticles for simultaneous determination of dopamine, uric acid, nicotine and caffeine over very wide linear ranges. <i>Journal of Electroanalytical Chemistry</i> (2020): 114648.	4.5
23.	Lavanya, N., G. Veerapandi, S. G. Leonardi, N. Donato, G. Neri, and C. Sekar . Fast and selective detection of volatile organic compounds using a novel pseudo spin-ladder compound CaCu ₂ O ₃ . <i>Materials Advances</i> (2020) 1 , 2368 – 2379	5.0
24.	Nehru, Lavanya, Sekar Chinnathambi , Enza Fazio, Fortunato Neri, Salvatore Gianluca Leonardi, Anna Bonavita, and Giovanni Neri. Electrochemical Sensing of Serotonin by a Modified MnO ₂ -Graphene Electrode. <i>Biosensors</i> 10 , no. 4 (2020): 33.	5.4
25.	Lavanya, N., S. G. Leonardi, S. Marini, C. Espro, M. Kanagaraj, S. Lokeswara Reddy, C. Sekar , and G. Neri. MgNi ₂ O ₃ nanoparticles as novel and versatile sensing material for non-enzymatic electrochemical sensing of glucose and conductometric determination of acetone <i>Journal of Alloys and Compounds</i> , 152787	6.2
26.	AC Anithaa, K Asokan, N Lavanya, C Sekar . Nicotinamide adenine dinucleotide immobilized tungsten trioxide nanoparticles for simultaneous sensing of norepinephrine, melatonin and nicotine <i>Biosensors and Bioelectronics</i> 143 (2019) 111598	12.6
27.	N Sudhan, N Lavanya, SG Leonardi, G Neri, C Sekar . Monitoring of Chemical Risk Factors for Sudden Infant Death Syndrome (SIDS) by Hydroxyapatite-Graphene-MWCNT Composite-Based Sensors, <i>Sensors</i> 19 (2019) 3437	3.9
28.	N. Lavanya, C. Sekar . SnO ₂ -SnS ₂ nanocomposite as electrocatalyst for simultaneous determination of depression biomarkers serotonin and tryptophan. <i>Journal of Electroanalytical Chemistry</i> 840 (2019)1-9.	4.5
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Dopamine: An analysis of chemosensory afferents and the projection pattern in the
central nervous system *Topographic Organization of the Pectine Neuropils in
Scorpions*. DOI: 10.1007/978-3-030-04324-7-5,

Academic Leadership Training: MHRD-LEAP

Successfully underwent three weeks “LEADERSHIP FOR ACADEMICIANS PROGRAMME (LEAP)” held during 4th - 16th February 2019 at NIT-Tiruchirappalli and IIIT-Sri City and 18th – 23rd February 2019 at NTU-Singapore. The programme was organized by the National Institute of Technology, Trichy in collaboration with Nanyang Technological University, Singapore under the sponsorship of Ministry of Human Resource Development (MHRD), Government of India.

Resource persons in various capacities

National Conferences	: 160
International Conferences	: 40
Invited Lectures	: 105